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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,891	07/26/2001	Jonnathan H. Kim	TDCO:006	7295

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EXAMINER

ALSMIRI, ISAM A

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/915,891

Applicant(s)

KIM, JONNATHAN H. 

Examiner

Isam A Alsomiri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-42 and 44-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7, 11-16, 20-25, 42, 44-48 and 52-57 is/are rejected.
- 7) ☒ Claim(s) 8-10, 17-19, 26-41, 49-51 and 58-60 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-15, 20-24, and 52-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Fullerton. Referring to claims 11, 20, and 52, Fullerton teaches transmitting a radio-frequency pulse in a multipath propagation medium (see col. 4 lines 59-65), receiving a plurality of pulses which inherently result from a transmission of the pulse (see col. 5 lines 8-12), it's inherent that the received pluses comprises a first-arriving pulse, discriminating using a detector, a first pulse in the plurality of pulses from the noise floor (see col. 12 lines 1- 7). Furthermore, it is inherent to have circuits for transmitting, receiving, and detecting.

Referring to claims 12-13, 21-22, and 53-54, Fullerton teaches correlating the received pulse with the decode signal to output a baseband signal, which reads on the claimed a correlator circuitry configured to correlate a received signal with a template signal to provide an output signal (see Abstract), a threshold circuitry configured to provide a first pulse signal (see col. 2 lines 36-40).

Referring to claims 14 and 55, Fullerton teaches signal tends to indicate the time position of a first pulse in the received signal (see col. 6 lines 54-60, col. 11 lines 1-5).

Referring to claims 15, 23-24, and 56, Fullerton teaches a scanning receiver circuitry (see col. 10 lines 1-7), receiving ultra-wideband signal (see col. 2 lines 29-31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7, 16, 25, 42, 44-48, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fullerton in view of Clark et al. Referring to claims 1 and 42, Fullerton teaches correlating the received pulse with the decode signal to output a baseband signal, which reads on the claimed a correlator circuitry configured to correlate a received signal with a template signal to provide an output signal (see Abstract), it's inherent that the received pulses results from the transmitted pulse and the received pulse comprises a first arriving pulse. a threshold circuitry configured to provide a first pulse signal (see col. 2 lines 36-40). Fullerton does not teach the threshold signal derived from a noise floor, Clark teaches a threshold circuit 210, which is derived from the noise level or the noise floor (see col. 6 line 47 – col. 7 line 3). It would have been obvious to modify Fullerton's system to derive the threshold signal from the noise floor to have the ability to eliminate most of the spurious signals while maintaining a high probability of receiving real signals.

Referring to claims 3 and 44, it is inherent to have a multiplier circuitry to provide an output signal that comprises the product of the template signal and the received signal (see

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Abstract, col. 2 lines 36-40), Fullerton teaches including an integrator circuit to integrate the output signal (see col. 2 lines 37-40 44-48).

Referring to claims 4 and 45, Fullerton teaches a comparator circuitry to compare the output signal with the threshold signal (see col. 12 lines 1-7).

Referring to claims 5 and 46, Fullerton teaches signal tends to indicate the time position of a first pulse (see col. 6 lines 54-60, col. 11 lines 1-5).

Referring to claims 6 and 47, Fullerton teaches a scanning receiver circuitry (see col. 10 lines 1-7), receiving ultra-wideband signal (see col. 2 lines 29-31).

Referring to Claims 7, 16, 25, 48, and 57, Fullerton is silent about whether the threshold signal includes a first number added to the product of a second number and a third number. However, Clark teaches deriving the threshold signal from a noise floor as mentioned above, which reads at least on the claimed first number, the product of the third and second number which is can be zero does not change the threshold value, therefore, having a threshold value reads on the first number added to the product of a second and a third number.

Allowable Subject Matter

Claims 8-10, 17-19, 26-41, 49-51, and 58-60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Terminal Disclaimer

The terminal disclaimer filed on December 02, 2002 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 09/915,620, filed July 26, 2001 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Arguments

Applicant's arguments filed August 8 2003 have been fully considered but they are not persuasive. Regarding claims 11-15, 20-24, 52-56, applicant argues that "According to the Applicant's best understanding, Fullerton does not relate to, and fails to teach, the claimed limitations" "a detector circuitry configured to discriminate from a noise floor the first-arriving pulse of the received signal" and "discriminating from a noise floor the first-arriving pulse of the received signal by using a detector circuitry". As mentioned in the office action, it's inherent that the received pluses comprises a first-arriving pulse, discriminating using a detector, a first pulse in the plurality of pulses from the noise floor (see col. 12 lines 1- 7). Furthermore, Fullerton teaches integrating (compare and detect which inherently include a detector) multiple pulses (the received pulses) and recovers each pulse (which include the first arriving pulse) *see col. 5 lines 8-12*). Which reads on the claimed "a detector circuitry configured to discriminate from a noise floor the first-arriving pulse of the received signal" and "discriminating from a noise floor the first-arriving pulse of the received signal by using a detector circuitry". Furthermore, the received plurality of pulses inherently results from transmission of the pulse, and the received pluses comprise a first-arriving pulse.

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Regarding claims 1-7, 16, 25, 42-48, 57, applicant argues mainly for the same reasons above and including 1) the Office Action fails to provide any proper, objective “evidence of ... a suggestion, teaching, or motivation” 2) The office Action appear to rely on hindsight and fails to set forth any objective evidence of record why, at the time of the invention, someone of ordinary skill in the art would have been motivated to combine Fullerton’s and Clark’s teaching. The applicant has not specified why the motivation is improper, as best understood by the examiner the motivation is proper (see office action). Furthermore, as mentioned in the office action Clark teaches a threshold circuit 210, which is derived from the noise level or the noise floor (see col. 6 line 47 – col. 7 line 3). It would have been obvious to modify Fullerton’s system to derive the threshold signal from the noise floor to have the ability to eliminate most of the spurious signals while maintaining a high probability of receiving real signals. As best understood by the examiner it’s a simple modification and does not require changing the main parts or processes of the system, it can be as easily as a software modification knowing the noise floor.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam A Alsomiri whose telephone number is 703-305-5702. The examiner can normally be reached on Monday-Thursday and every other Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Isam Alsomiri



October 19, 2003



THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600